



Center for

Educator Compensation Reform

PAYING FOR AND SUSTAINING A PERFORMANCE-BASED COMPENSATION SYSTEM

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PAYING FOR AND SUSTAINING A PERFORMANCE-BASED COMPENSATION SYSTEM

One of the most important steps that districts and states must take when developing and implementing an alternative employee compensation system is to rigorously project program costs, year by year. This module illustrates how state and local education agencies can undertake projections that will protect them from financial overexposure and possible fiscal deficits. These financial projections are not difficult, but experience suggests that states and districts too often fail to estimate costs accurately, or they skip this critical step altogether. School systems that underestimate potential personnel costs or miscalculate fiscal exposure risk serious financial losses, and possibly legal action and penalties, as well as loss of credibility among teachers and the public. One purpose of this module is to help states and districts avoid these costly mistakes by demonstrating how to make accurate and reasonable cost projections to ensure that a new pay plan is affordable.

It is insufficient for a new teacher compensation system to be affordable in the short term. It must also be sustainable over time. Incentive programs will not be accepted or effective if teachers do not believe that state and district officials will actually deliver earned financial rewards as promised. Unpredictable state funding, in particular, has given teachers reason to be skeptical. California, for example, implemented two statewide performance-pay plans and numerous other financial incentives for teachers that were subsequently dismantled when the state economy weakened.¹ State lawmakers in both Texas and Florida considered cutting funds for alternative teacher compensation plans in 2007 to pay for across-the-board teacher pay raises or to help balance the state budget.² As one teachers union official in Florida wryly observed, “The No. 1 reason pay plans fail is because there is no pay in the plan.”³ A second purpose of this module, therefore, is to suggest steps that states and districts should take early on to secure adequate and stable funding.

Why should states and districts rigorously project the costs of any alternative compensation plan?

No matter how well designed a compensation system may be and no matter how much organizational or political support it has, it will not succeed if it is not affordable. Accurate cost projections are especially critical if school systems plan to expand pay programs piloted in just a few schools to all schools in the district or to all districts in the state. Hassel (2002) warns education and policy leaders to proceed with great caution when designing and funding performance-pay systems because inaccurate cost estimates are much riskier in public education than they are in the private sector:

Policymakers need to think carefully about how to provide adequate funding for performance-based rewards. If all teachers can potentially win the maximum award, the potential liability is high. In private enterprises, companies can tie performance awards to the achievement of financial objectives; if many workers win performance awards, the company by design has the funds to make the payouts. Public education doesn't work that way. If an unexpectedly high number of teachers hit their targets, that does not mean the system has somehow garnered extra revenue to make the payments. But if there is a "fixed pot" for rewards, what will happen if the bonuses teachers qualify for exceed the funds available? Failure to follow through on promised awards can seriously undermine support for and the value of a performance-based system.⁴

Ample evidence suggests that states and districts do frequently underestimate overall costs of alternative compensation plans as well as the numbers of teachers and schools that will qualify for awards. According to Odden and Wallace (2007), school systems have only three choices when this happens:

1. increase the budget (the preferred approach);
2. reduce the amount of the award that each teacher or school receives (an acceptable solution, but second best); or
3. change the qualification requirements so that fewer teachers or schools qualify for bonuses (not recommended).⁵

Although Odden and Wallace argue that increasing the budget is the best option, few states and districts are likely to have sufficient funds in reserve to cover such contingencies. One notable exception is Lake County, Florida. During the 2006-2007 school year, the state provided \$2.1 million to Lake County so that the district could pay bonuses worth approximately \$2,000 to 25 percent of its teachers under the state Merit Award Program (MAP). However, the district discovered that it was nearly \$200,000 short at the end

of the school year, in part because almost 38 percent of county teachers qualified for the awards. In addition, district staff had failed to account for taxes and other federal withholdings when the budget was prepared.⁶ In this case, the school board did move to increase the budget to cover the cost overrun so that all eligible teachers could receive their bonuses.⁷

More often, states and districts will simply reduce the amount of the original award if costs exceed budgeted revenues. The Texas Educator Excellence Grant program, for example, provides grants to local school districts for the purpose of rewarding teachers in high-poverty schools that demonstrate the highest levels of student achievement or improvement. The state requires that 75 percent of the grant funds be distributed to teachers, and recommends that schools offer bonuses of \$3,000 to \$10,000 so that they are meaningful.⁸ Yet in practice, some teachers receive far less than the recommended minimum. For example, when more teachers than expected qualified for performance awards in Abilene, Texas, in 2007, school board trustees simply decided to give less money to each teacher. No individual teacher received more than \$1,777, and some teachers received as little as \$451.⁹ Evidence indicates that providing smaller-than-recommended performance awards was a fairly common practice during the first year that the Texas Educator Excellence Grant program was in place. An independent study of the program found that the average maximum bonus that districts across the state intended to pay teachers in 2007 was \$2,263.¹⁰

As another example, California schools that met state growth targets were supposed to receive approximately \$150 per student in performance bonuses under the state's now-defunct Governor's Performance Award program. However, when unexpectedly high numbers of schools qualified for the awards in 2001, California officials cut the size of the bonuses by more than half, to approximately \$63 per student.¹¹ In 2002, when the state was facing a significant budget shortfall, state legislators cut the bonuses to approximately \$37 per student.¹² Odden and Wallace note that this approach does provide awards to everyone who earned them and does allow the organization to stay within budget, but it is bound to create skepticism about the program thereafter.¹³

The third option that education organizations may choose, but that Odden and Wallace strongly caution states and districts to avoid, is to change the original performance improvement targets so that fewer teachers qualify for bonuses, thereby allowing the organization to stay within budget. Policymakers should be aware that changing eligibility criteria for performance pay can be extremely risky and in some cases has resulted in legal action. In February 2001, for example, a group of teachers in the Sacramento City Unified School District filed a lawsuit against the California Department of Education, alleging that they were unfairly disqualified from

earning bonuses under the Governor's Certificated Staff Performance Incentive program after the state education agency changed the eligibility rules.¹⁴ The amended eligibility rules required schools to meet performance improvement targets for two consecutive years, rather than one, to decrease the possibility that perceived gains in performance were actually the result of one-time scoring errors or large declines the previous year.¹⁵ In April 2001, a state superior court ruled in favor of the Department of Education, but in December 2002 an appellate court overturned the decision and sided with the 30 teachers. The appellate court ruled that the state Department of Education had overstepped its authority by amending the legislation that created the awards program and awarded each of the teachers the maximum \$25,000 bonus for raising student test scores.¹⁶

Although Odden and Wallace propose that school districts have only three choices when more teachers than expected qualify for awards, there is a fourth choice that should be avoided at all costs – not paying some teachers who legitimately earned performance bonuses. This is an unacceptable option under virtually any circumstances, but there are instances in which districts either have not paid teachers or have at least considered it. According to reports in the *Orlando Sentinel*, for example, some senior staff in Lake County, Florida “planned to pay bonuses with the state’s money until their \$2.1 million was exhausted. Whoever didn’t get a check before the money was gone would be out of luck, said Carol MacLeod, the district’s chief financial manager.”¹⁷ Fortunately, the school board rejected this idea, but other districts such as Leon County, Florida, have adopted equally unacceptable solutions. Under Florida’s former state performance-pay program (Special Teachers Are Rewarded, or STAR), up to 25 percent of teachers in a district could earn state-funded salary bonuses, based on student test score gains. When teachers in Leon County tied for awards, the district did not supply the additional funds needed to ensure that all eligible teachers would be paid. Instead, the district used a lottery system to determine which of the teachers who tied would receive a bonus and which would not.¹⁸ When a performance reward system dissolves into a matter of pay by chance, then the consequences for morale are understandably terrible. “It sends a message to us,” said one teacher, “work as hard as you want, but it’s not going to matter.”

Few mistakes will undo an alternative compensation plan faster than a school organization being unable to pay bonuses or financial awards to those who justly earned them. The following section of this module explains what states and districts can do to minimize the chances of making such mistakes.

Estimating the costs of different types of alternative compensation plans

Regardless of the type of compensation plan that is ultimately chosen, all states and districts need to place an upper limit on program costs to ensure that payouts do not exceed available revenues. Some pay-for-performance compensation plans are relatively open-ended so that it is possible for many eligible participants to perform at a level sufficient to earn an award. These open-ended plans need bounded estimates of maximum, minimum, and probable financial exposure. Other pay-for-performance plans, relying upon what is known as a tournament, can restrict possible costs by placing a cap on the percentage of individuals or schools that can qualify for performance awards. Premium pay plans, which offer additional compensation to teachers willing to work in hard-to-staff schools or teach hard-to-fill subjects, can control costs most easily because the size of the incentive and the maximum number of awards can be predetermined. The following sections explain how to project the costs of these three types of alternative compensation plans.

Estimating the cost of an open-ended pay plan

In an open-ended plan, two types of information are needed to calculate program costs:

1. the maximum number of eligible participants (individuals or groups, if it is a group or schoolwide award system); and
2. the maximum possible amount that each individual or group can earn. This amount can be either a percentage of base salary or a set dollar amount.

To estimate maximum financial exposure, multiply these two numbers for each school year. For example, suppose the maximum number of teachers eligible for performance pay is 600 and the maximum number of administrators who are eligible is 32. In addition, suppose that teachers can earn a maximum performance bonus of \$3,500 each year, while administrators can earn a maximum of \$5,000. The district's maximum financial exposure for one year would be:

$$\begin{aligned} &(600 \times \$3,500 \text{ for teachers}) + (32 \times \$5,000 \text{ for administrators}) = \\ &(\$2.1 \text{ million for teachers}) + (\$160,000 \text{ for administrators}) = \\ &\$2.26 \text{ million} \end{aligned}$$

The district's maximum financial exposure over a five-year period would be \$11.3 million (\$2.26 million x 5) if the maximum numbers of individuals eligible for awards and the maximum size of the rewards remained constant each year. However, we strongly encourage school systems to project costs

year by year, because it is unlikely that these factors will remain constant. If bonuses work as intended to motivate teachers to change their practice in ways that will improve student learning and to attract and retain those individuals who are the most skilled at raising student achievement, the number of schools or individuals qualifying for performance bonuses should increase over time.

Moreover, some performance-pay programs are structured so that the number of schools eligible to participate in the program may increase over time. These types of pay plans can turn out to be far more costly than expected, such as one implemented in Anne Arundel County, Maryland, in 2004.¹⁹ Anne Arundel County's program offered \$1,500 bonuses to teachers and \$5,000 bonuses to principals willing to work in schools that failed to meet state performance targets, but doubled the size of the bonuses if the schools made sufficient improvements. Eight schools participated in the program during the first year, at a cost of \$1.2 million. By the second year, the number of schools that failed to meet state performance targets and were therefore eligible to participate had risen to 14, and program costs were expected to increase to about \$3 million.

Although it is unlikely that all eligible individuals or groups will qualify for the maximum award in a performance-pay program, there is no "average" percentage that education organizations can reliably use to predict how many teachers or administrators will qualify. Previous state and district payouts suggest that the percentages of individuals who qualify for performance awards vary widely across different types of compensation plans with different eligibility criteria. In Guilford County, North Carolina, for example, only 24 percent of teachers qualified for performance bonuses in 2007.²⁰ The same year, 58 percent of Houston's teachers and 83 percent of the district's principals qualified for performance awards.²¹

What is important to bear in mind is that even if it is unlikely that all teachers or schools will earn awards, an organization must be conscious of its maximum program costs so that it is prepared to pay financial awards to everyone who earns them.

More reasonably, it is possible to assign probabilities to various levels of financial exposure. Determining boundaries or probabilities on pay estimates necessitates prior performance data for the students of individual teachers or groups of teachers involved (by school, grade levels, or subject matter areas). These prior performance data can then be used to construct a model and estimate probable future scores or performance indicators. It is from these approximations that future financial exposure can be estimated. Estimates can be reasonably produced from one year of prior performance data, but we recommend that organizations use at least two years of data, if possible, to increase the precision of the estimates. Here is a probability example.

Even if it is unlikely that all teachers or schools will earn awards, an organization must be conscious of its maximum program costs so that it is prepared to pay financial awards to everyone who earns them.

Where schools or districts are paying incentives strictly or substantially for gains in pupil achievement, as measured by standardized test scores, it is often possible to undertake projections of likely future student achievement based upon past performance. For example, if the incentive applies to mathematics teachers, and the state systematically measures student mathematics performance through standardized testing, then the steps would be as follows. First, gather the scores from around the state, and around the district, for mathematics for the grade levels involved. Next, calculate the number of students who routinely move upward from specified test score point “A” to point “B” from year to year on the test. Then divide the number of students who display test score gains of the magnitude proposed to be rewarded by the number of students taking the standardized examination. The result is the probability of test score improvement. Of course, a school, a district, or a state may vary from statewide or national norms, depending upon the characteristics of its student body and the instructional capacity of its staff. For this reason, it is better to calculate such probabilities school by school, if data permit.

After several years of experience with an achievement-oriented pay-for-performance plan, a district can accumulate sufficient past performance data to be able to assign reasonable probabilities to future teacher accomplishments. However, a district budget officer and other leaders involved should expect that the longer an incentive plan is in place, and the more experience teachers have in meeting goals, the greater the probability that more teachers will reach the goals. The system will need to be recalibrated from time to time to take into account the consequence of greater teacher learning and quite possibly improvements in teacher instructional capacity. Houston, for example, earmarked \$25 million for teacher performance pay in 2008, an increase of \$10 million, in anticipation that more teachers would receive bonuses this year than in 2007 and that those who did would also earn larger amounts. District officials projected that about 10,300 teachers would earn bonuses in Year 2, compared to roughly 8,000 in Year 1 and that the average award would increase from \$1,850 to \$2,120.²²

Although state and local budget projections should assume that more teachers will reach performance targets over time, Heneman, Milanowski, and Kimball (2007) urge state and district officials to resist pressure to lower standards in order to allow more teachers to qualify for awards. They caution that:

To effectively motivate efforts to improve performance, pay differentiation must continue over time. Research suggests, however, that it does not. Over time, teachers exert pressure to lower performance standards, increasing the number of teachers who become eligible for performance pay (Hatry et al., 1994; Murnane and Cohen, 1986). While such an eventuality may enhance acceptance of the plan, it also drives up

costs, creating long-term funding issues. If performance standards are to be maintained, the number of teachers eligible may have to be limited or the size of the payouts reduced — either of which would raise teacher acceptance issues.²³

Determining probabilities on pay estimates is also important so that state and district officials are prepared for potential criticisms about the affordability of alternative compensation systems. As an example, Oklahoma legislators held a series of meetings during 2007-2008 to consider a statewide performance-pay plan for teachers. The president of Oklahoma's state teachers union, which opposes performance pay, argued that "the system would collapse" if an extensive performance-pay plan were adopted and that it would cost the state \$470 million more in teacher pay if every Oklahoma teacher earned a bonus.²⁴ Estimating *probable* financial exposure, rather than assuming that every teacher in the state would earn the maximum award, would enable supporters of performance pay to present more reasonable estimates of program costs to state policymakers.

Estimating the cost of a tournament-style pay plan

The second type of pay-for-performance structure is the tournament, which can more precisely fix program cost exposure. Examples of tournament-style plans are Florida's former E-Comp (Effectiveness Compensation) and STAR programs, and a former performance-pay system developed by the Colonial School District near Philadelphia. These plans attempted to award bonuses to the top 10, 25, and 20 percent of teachers, respectively.²⁵

Suppose, for example, that a district or state decides to award a total of \$1 million for the schools or teachers whose students make the biggest test-score gains and receive positive evaluations of their classroom performance. Many means can be arranged to determine who is eligible and what specific performance thresholds trigger a payout for the top performers. Here is an example.

State "A" uses a value-added approach to measure gains in student learning over the course of the school year. The state specifies that the 200 teachers whose students make the greatest gains in reading and mathematics on the state's achievement test from Year 1 to Year 2 will each receive \$5,000 as an annual salary premium. Under this arrangement, the number of teachers is fixed and the amount of the potential individual award is fixed. The only unknowns are the scores of students. However, by limiting the number of eligible teachers and placing a ceiling on the amount of bonuses, the state has protected its treasury.

It is important to note that teachers generally dislike tournaments, arguing that these pay-for-performance arrangements foster competition when what is needed is professional cooperation. The point here is not to argue for or

against tournaments, but simply to note that districts and states may face strong resistance to them, even if they make it vastly easier to calculate total program costs.

Estimating the cost of premium pay for teachers in hard-to-staff schools and those who teach hard-to-fill subjects

If a pay-for-performance plan is defined as premium pay for individuals willing to be assigned to hard-to-staff schools or who are eligible to teach hard-to-fill subjects, then the organization has two ways to place an upper limit on program costs. The first approach involves the following steps:

1. determine how big the bonus needs to be in order to be effective as a labor market incentive.²⁶ As an example, this might be \$3,000 to attract secondary math and science teachers and an additional \$3,000 if they agree to teach in a designated high-poverty, low-performing school;
2. calculate how many teachers are needed at how many schools (e.g., five secondary math and science teachers per school at four high-need middle and high schools = 20 teachers); and
3. multiply the two (e.g., \$6,000 x 20 = \$120,000).

A second way to limit program costs is to predetermine how much money the district is willing to spend for teachers who are in scarce supply and then simply divide the total pool of funds among those eligible to receive it. For example, suppose a district decided that it could spend no more than \$60,000 for incentive pay to attract math and science teachers to high-need schools. If the district managed to attract 10 of these teachers, the maximum recruitment bonus that each one could receive would be \$6,000. But if the district managed to hire 20, the maximum bonus that each one could receive would be reduced to \$3,000.

Here is another example of a fiscal limitation strategy. State “B” specifies that it will pay a \$5,000 premium for each year a qualified physics teacher agrees to move to or remain teaching in a high-need school. The state then specifies that this reward or salary bonus will be allocated to as many as 200 teachers statewide. The state will pay the bonus in the first fully documented 200 submissions. Under such an arrangement, it is known that the maximum total payout is \$1 million and that districts are competing to receive some share of this amount.

States and districts that follow the steps presented thus far will greatly improve their chances of making accurate and reasonable projections of the direct costs of teacher and principal payouts, regardless of the type of alternative compensation system that they choose to implement. However,

policymakers should bear in mind that performance-pay plans may also entail some substantial indirect costs, especially at the outset of the project. The following section describes some of these additional planning and implementation costs and presents several valuable lessons learned from states and districts that did not factor these costs into their initial budgets.

Additional potential costs of operating a performance-pay system

If organizations decide to count bonuses or premiums toward employee retirement, then there may be added costs for paying into a state or district pension fund proportionate to the dollar amount of the performance rewards. Other additional costs that must be factored into the budget include the employer's share of taxes and other federal withholdings.

In addition to the direct costs of pay-for-performance payouts, there can also be some extra costs associated with administration, such as accounting or payroll procedures or the effort involved on the part of a research department or testing official to calculate which participants qualified for awards. Although these variable costs are usually minimal, some additional costs can be quite large. For example, Philadelphia and Steamboat Springs, Colorado, rejected performance-pay plans several years ago that included teacher performance appraisal systems that were too expensive to administer.²⁷ Philadelphia's proposed pay plan depended heavily on classroom observations and was dropped, in large part, because the district could not afford to expand the \$500,000 pilot to all 12,000 of its teachers.²⁸ Similarly, school board members in Steamboat Springs, Colorado, voted to abandon a performance-pay plan when one analysis revealed that implementation costs alone could exceed \$600,000 a year for the first 10 years.²⁹

More recently, the Hernando County School Board opted to reverse its decision to participate in Florida's state performance-pay program in 2007 because the district estimated that it would cost nearly \$400,000 in local funds to design new tests and teacher evaluation systems needed to start up the program.³⁰ Seminole and Volusia Counties also revoked their initial agreements to participate in Florida's state performance-pay program because the state requires districts to adopt or develop tests in all subject areas so that all teachers are eligible to earn awards. Seminole County officials estimated that the district would have had to develop more than 500 tests at a cost of at least \$300,000. Volusia County officials pegged the cost of similar efforts in their district at \$600,000 or more.³¹

We turn now to the final issue that districts and states must consider when estimating the cost of a pay-for-performance system – the structure of the payments. This issue is important because evidence suggests that the way that payments are structured will affect not only the long-term operating costs of the new pay system, but may also affect the organization's ability to target rewards to its most productive teachers.

How should districts and states structure the payments?

Districts and states can pay performance awards in multiple ways and mix different reward structures within a single compensation system. Awards can be one-time bonuses, or they can be folded into teacher pay to become permanent salary increases. The awards can be structured as premium pay that is paid in addition to regular salaries for teachers of hard-to-fill subjects or those who work in hard-to-staff schools. Some awards can even be structured as in-kind payments made in the form of goods and services, rather than cash (e.g., loan forgiveness, tuition benefits, extra credit toward teacher retirement, tax incentives, or housing incentives).

In Toledo's TRACS (Toledo Review and Alternative Compensation System) program, completion of the professional development track results in an increase equal to 5 percent of base pay; completion of TRAC 2 for group performance awards results in 10 percent added to base pay; and completion of TRAC 3 for individual performance for teachers in hard-to-staff schools leads to an increase equal to 15 percent above base pay.

Denver offers specific opportunities for teachers to earn bonuses (e.g., 3 percent for teaching a hard-to-fill subject or for working in a hard-to-staff school) and other specific opportunities for teachers to increase their base pay (e.g., for earning National Board Certification or achieving satisfactory professional evaluations). In some cases, the type of reward is contingent upon the individual's level of performance. Teachers in Denver who meet one of their annual student growth objectives can earn a 1 percent bonus, for example, but those who meet both of their objectives can earn a 1 percent increase in base pay.³²

Although teachers may prefer increases to their base pay over one-time bonuses, Odden and Wallace argue that most compensation experts strongly urge education organizations to provide awards as one-time bonuses. They note that,

This makes the payment contingent on improving performance each year. If the performance improvement target is met, the bonus is paid; if it is not met, the bonus is not paid. And each year new improvement targets are set. When annual performance awards are added to base pay, the individual is rewarded for the rest of his or her career for that one time, annual performance accomplishment. Organizations that add annual performance awards to base pay find that, over time, their highest paid workers are their oldest workers, not their most productive workers.³³

Another compelling argument for making teacher awards contingent on improving performance each year, rather than adding awards to base pay, is that in a school setting, we can only show who was a good teacher in the past, not who will be a good teacher in the future.³⁴ This is an important distinction because research shows that teacher effects on student achievement have a strong random element.³⁵ Goldhaber (2006) reports that “relatively little research has been done on the extent to which teacher effectiveness, at least as measured by student test scores, is a stable characteristic.”³⁶ One review of the literature on the persistence of teacher effects suggests that only about 40 to 50 percent of teacher effects persist at the elementary level, and only about 30 percent persist at the high school level.³⁷ This means that it is hard to identify in advance which teachers will be top performers the next year. It is even more difficult to predict who will be top performers – and the appropriate recipients of performance awards – over the next several years.

What are some common mistakes that can occur if states and districts do not build in sufficient time for quality control checks?

As a general rule, rewards should be paid as close to the period of performance as practicable. This strategy helps teachers see the link between their performance and their pay more clearly. However, states and districts should also adhere to two other very important rules of thumb:

- 1. Allow enough time for the reasonable delivery of data.**
- 2. Allow enough time for rigorous quality-control checks.**

If implementing a more complex performance-based compensation system, consider a pilot or dry-run year to uncover any bugs in the system before making payouts. Implementation glitches can reduce the credibility of the system and lead to substantial teacher confusion and stress.

California is a case in point. In 1998, an advisory committee reportedly urged the state Department of Education to delay initial payout of the state’s Certificated Staff Performance Incentives to be sure that awards were based on reliable data, but state officials were eager to implement the new compensation plan quickly.³⁸ The consequences of this decision were costly.³⁹ In one case, teachers in four K-12 schools received nearly \$1.8 million in performance awards from the high school pool, even though the majority of the students enrolled were in the elementary or middle school grades. In another case, scoring errors resulted in an overpayment of \$750,000 in bonuses to California schools and teachers who should not have received them.⁴⁰ In both instances, the state bore the brunt of the errors, and individual teachers and staff were not asked to return funds when the mistakes were discovered.

Houston, too, encountered a number of implementation glitches when the district distributed its first round of individual teacher payouts in 2007, although the district has since taken a number of steps to correct these problems. In 2007, nearly 100 teachers were asked to return portions of performance bonuses that they had mistakenly received because a computer programming error caused part-time teachers to be paid as if they worked full-time. Moreover, the district had to make an additional \$1 million payout to several hundred teachers who had been overlooked two months earlier when the district made its initial \$14 million payout.⁴¹ To avoid repeating the same mistakes, the district has created a private web site that now allows employees to review an estimate of their bonuses and appeal any errors three weeks before awards are actually distributed. In addition, new data verification processes have been established to ensure that teacher data are coded correctly in the computer system.⁴²

Errors in the opposite direction can be equally damaging to state and local efforts to build support for new teacher pay systems. At the same time that California officials discovered that they had made \$750,000 in overpayments, they found that correcting the scoring errors would render teachers in 16 schools ineligible for bonuses that they had been led to believe that they would receive. The 16 schools had appeared on a preliminary list of most-improved schools that the state had released earlier that year, and teachers were predictably disappointed when they learned that they were no longer eligible for bonuses as high as \$25,000.⁴³

In North Carolina, thousands of middle school teachers who would have been eligible for an estimated \$12 to \$15 million in performance bonuses in 2004 received no awards because an outdated scoring formula had been used to measure student growth. When only two of the state's 388 middle schools made expected gains in 6th-grade reading that year, officials in several districts asked the state to reanalyze the inexplicably low scores.⁴⁴ Although an advisory board recommended that the state education agency recalculate and adjust the scores, the state board of education was leery of what might appear to be lowering standards and decided to let the results stand.⁴⁵ It was not until the following school year, when 6th-graders' test results revealed the same suspicious pattern, that North Carolina decided to omit 6th-grade reading scores from determinations of school and teacher bonuses and revalidate all of the state's accountability formulas.⁴⁶

What sources of funding will be used to sustain the new compensation system?

A challenge common to all states and local school districts is how to maintain a pay-for-performance plan after original program funds are exhausted. Five strategies that states and districts should consider are as follows:

1. redeploy current state, district, or school resources;
2. redirect future resources;
3. repackage state and federal categorical aid programs;
4. seek additional public funding; and
5. seek philanthropic or corporate support.

Districts may use one or several of these strategies in combination. Denver, for example, sought philanthropic support from numerous local and national sources and also asked local voters to approve a modest increase in property taxes specifically to fund ProComp, its alternative teacher compensation system (Strategies 4 and 5). Minneapolis' alternative teacher pay plan is funded as a line item in the state budget (Strategy 2). Toledo initially implemented its TRACS program using existing general fund revenues and then received supplemental funding through the federal Teacher Incentive Fund (TIF) to reward individual performance of teachers in hard-to-staff schools (Strategies 2 and 3). Houston initially used local school district funds to develop its pay-for-performance program, then received a federal TIF grant in 2006 and philanthropic support from the Broad Foundation in 2007 (Strategies 2, 3, and 5).

Crucial to any one or a combination of these strategies is having (a) accurate projections of the annual costs involved in extending a pay-for-performance plan and (b) an overarching and unified strategy so that parts of the organization do not step on one another in efforts to secure sustained funding.

Initiating a pay-for-performance plan is costly for a school or district. The biggest of these added costs are the bonuses or premiums paid to high-performing educators. There are also additional administrative costs, at least at the outset. Much, maybe most, of these costs are associated with the time and organizational effort required to design a program, persuade colleagues to participate, and inform the public of the advantages of a compensation plan that ties teacher and principal pay to job performance. Expanded data system needs are another source of added expense.

Most of the time, local school districts are operating at the limit of their currently available revenues and perceive themselves as having almost no slack funds. Any changes in operations or services, such as performance

pay, are typically seen as incremental costs that require the identification of new resources from somewhere outside the district. Sources of external dollars might include local taxes, new state funding, foundation grants, or federal sources.

Few school districts are willing or able to alter or abandon an almost century-long practice of paying teachers by way of a single salary schedule, which bases teachers' salaries on years of teaching experience and a combination of college credits accumulated and advanced degrees earned. If there is to be any deviation from this long-accepted compensation model, districts generally perceive the change as incremental, something to be done in addition to the amount and the manner in which teachers are presently paid. In the majority of school districts, performance pay is viewed as an add-on, perhaps a desired add-on, but an activity that nevertheless necessitates added revenue.

Because performance pay is frequently perceived as an add-on, the financial stimulus created by new sources of state and federal funds has been crucial. Without these dollars it is unlikely that many of the present experimental efforts would ever have been launched. However, these external sources of funding are unlikely to persist. Instead, they are generally granted to a local school or school district with the explicit understanding that they will terminate at a specific time in the future and will likely decrease every year after the initial operating year. Knowing of the short-term nature of these stimulus funds, local educators reasonably ask about means for sustaining the effort. What possibly can be done to ensure that pay-for-performance can be carried on after startup monies are exhausted?

The good news is that there are effective strategies that state and local education agencies can use to sustain pay-for-performance programs. Any officials giving consideration to this issue at the outset, as they design and begin to implement pay-for-performance, are to be commended for their foresight. However, as described earlier, it is important to know the long-term operating costs of a pay-for-performance system when making plans to sustain it.

When constructing an overarching strategy to ensure the long-term fiscal sustainability of a performance-based compensation system, a superintendent should assemble appropriate players in a district and seek external advice where useful. What is to be avoided is separate parts of a district stepping on each other and inadvertently providing mixed messages to potential funders. Time spent early on planning may well pay dividends later, or at least diminish the prospect of costly duplication of effort.

Strategies for Sustaining Financing

A Caveat: Multiple Viewpoints. Before explaining the strategies for sustaining performance award programs in detail and providing illustrations, it is important to note that public school districts operate in a political environment. Often, elected officials have the last word over a school district budget. A superintendent or principal may well put forward a rational means for redeploying existing resources to sustain a performance pay plan, but find that the judgments of elected officials run in an opposite direction. The recommendations that follow are written from a rational resource allocation perspective, but we are well aware that they might be overridden by others for a variety of political reasons.

Strategy 1

Redeploy existing resources

A growing body of evidence suggests that certain educational strategies hold considerable promise for elevating student achievement. Among these are preschool, primary grade class-size reductions, and some compensatory instructional services, such as Success for All. These efforts appear to hold greater promise for elevating the achievement of low-income students than others.

There are other frequently deployed schooling components and actions, such as across-the-board class-size reductions, for which there is limited empirical support.⁴⁷ That is, some activities and services, regardless of their popularity with educators or parents, have not been shown to lead systematically to increases in student academic achievement. This distinction is important because one strategy for sustaining an alternative compensation system would be to redirect existing funds from these kinds of activities and services, but not from those that have a greater likelihood of increasing student achievement. It would not be advisable, for example, to redeploy funding from relatively small primary school classes to support an educator performance-pay plan, but redeploying funds from anticipated secondary school class-size reductions might well be justified. In considering such an action, however, one might remember the caveat regarding political judgments that serves as the opening for this section.

Strategy 2

Redirect future expenditures

Performance pay can also be financed, over time, by substituting various performance-related criteria for additional degrees and years of teaching experience – components of the current single salary schedule that are not consistently correlated with student performance. Odden and Wallace acknowledge that “it is difficult politically to get teachers to agree to reallocate substantial portions of dollars in the current salary schedule into a new one,” but they argue that,

funding new salary systems via salary dollar reallocation is the best route to solidifying the new salary structure in the future. Otherwise what states and districts will create are salary add-ons which, given past history, will be jettisoned when the economy slumps and public dollars drop.⁴⁸

In each budget planning cycle, school districts sometimes sustain practices, facilities, and equipment that contribute little to increases in student achievement. For example, the annual incremental spending attached to single salary schedule projections usually results in an approximate 2 percent annual spending increase for public school districts. That is, the added years of experience accrued by a district’s teacher workforce and the number of added college credits and academic degrees for which a school district is obligated to reimburse its teacher workforce usually accrues to a 2 percent increase in year-over-year professional personnel expenditures.

Although this is a commonly accepted practice among school districts, there is little empirical support for compensation policies that automatically reward teachers for additional degrees and experience. The preponderance of evidence suggests that teachers who have completed graduate degrees are not significantly more effective at increasing student learning than those with no more than a bachelor’s degree, with the possible exception of some advanced degrees at the secondary level, particularly subject-specific degrees in math and science.⁴⁹ And while the research is quite clear that there is a relationship between teacher experience and student achievement, the preponderance of evidence suggests that the biggest improvements in teacher effectiveness occur during the first few years in the classroom.⁵⁰ Thus, diverting at least a portion of the funds that would otherwise be spent on automatic step increases for additional degrees and experience into a sustaining fund for performance pay would make great sense.

If one assumes a school district annually receives from various sources \$10,000 per pupil in revenue, and has 5,000 enrolled pupils, the resulting multiplication produces a \$50 million annual operating budget. One can reasonably assume that a minimum of 60 percent (\$30 million) of this will

be paid to teachers in salaries and fringe benefits. The 2 percent that conventionally would need to be added to the certificated personnel section of such a budget would result in a \$600,000 annual increment for experience and college credits. These funds could be converted to sustaining a performance-pay system.

Assuming further that the 5,000 student district had a pupil/teacher ratio of 15/1, then the district would have approximately 333 FTE (full-time-equivalent) teachers. Assuming further that effective teachers are to be accorded bonuses of \$10,000, there would be sufficient funding to provide approximately 18 percent of the educator workforce with significant performance bonuses. Reducing the award to a \$5,000 per teacher average would double that percentage figure.

Strategy 3

Repackage existing state and federal categorical program funds

There exist literally billions of dollars in state and federal categorical funds that presently are distributed to local school districts and states on competitive project bases or through a formula. Artful combinations and redeployment of these funds may well result in sufficient unobligated revenues to sustain a performance-pay program. This is a particularly good use of professional development categorical funds. Also, categorical funding directed at elevating the performance of low-income students may be used to develop initiatives to recruit and retain effective teachers in hard-to-staff schools or to attract talent in hard-to-fill subjects. According to guidance from the U.S. Department of Education, two of the 18 ways in which states may use their state-level activity funds from Title II, Part A specifically mention the development of new forms of teacher compensation, though it should be noted that these funds total less than 2.5 percent of the state's total allocation under Title II, Part A:

1. "Developing, or assisting LEAs in developing, merit-based performance systems and strategies that provide differential and bonus pay for teachers in high-need academic subjects and for teachers in high-poverty areas."
2. "Developing, or assisting LEAs in developing, teacher advancement initiatives that promote professional growth and that emphasize multiple career paths and pay differentiation."⁵¹

The vast majority of Title II-A funds go to local education agencies, rather than states, and four of the nine ways in which LEAs may use these funds specifically mention educator compensation reforms:

1. “Developing and implementing strategies and activities to recruit, hire, and retain highly qualified teachers and principals. These strategies may include (a) providing monetary incentives such as scholarships, signing bonuses, or differential pay for teachers in academic subjects or schools in which the LEA has shortages....”
2. “Developing and implementing initiatives to promote retention of highly qualified teachers and principals, particularly in schools with a high percentage of low-achieving students, including... financial incentives to retain teachers and principals with a record of helping students to achieve academic success.”
3. “Carrying out programs and activities that are designed to improve the quality of the teaching force, such as... merit pay programs.”
4. “Carrying out teacher advancement initiatives that promote professional growth and emphasize multiple career paths (such as paths to becoming a mentor teacher, career teacher, or exemplary teacher) and pay differentiation.”⁵²

Although school districts have considerable flexibility to use their Title II-A funds on a broad range of activities to improve teaching quality, reports indicate that districts continue to spend the bulk of their Title II-A funds on class-size reduction. In 2002-2003, the proportion of Title II-A funds that districts spent on class-size reduction was 57 percent. By 2006-2007, the proportion that districts used for this purpose had decreased to 47 percent, but was still approximately \$1.3 billion. Moreover, 13 percent of districts allocated all of their available funds to reducing class size.⁵³ Reallocating some of these federal funds might be one way for districts to support new strategies to compensate teachers.

Strategy 4

Seek additional public funding

The boldest action that can be taken on this dimension is to seek a revenue increase, possibly necessitating a tax increase levied by a local school board or whatever agency might be the overarching taxing authority in the school district's electoral jurisdiction. A tax increase would add to the school district's operating revenue and, presumably, could cover fully or at least subsidize the cost of a performance-pay plan. This strategy involves increasing a school district's general fund revenues. Districts and states should begin planning early if they plan to pursue this strategy because experience shows that obtaining adequate and reliable funding may require multiple attempts. El Paso County, Colorado, for example, placed a property tax increase on the November 2007 ballot to fund school improvements

designed to boost student achievement in Harrison School District 2, including performance-based incentives for teachers.⁵⁴ The property tax increase would have been used to sustain the district's performance-pay program when its federal TIF grant ends, but voters rejected the bond measure, and the district was unable to secure the funding.⁵⁵

A second means for increasing revenues is by lobbying the state legislature either to increase a district's general fund revenues (likely increasing such revenues of all similarly situated districts in a state) or requesting enactment of a categorical aid statute directly intended to cover or subsidize the cost of a performance-pay plan.

Another public funding strategy is to seek a locally generated categorical aid revenue increase, an increase directly aimed at paying the cost of a performance-pay plan. Denver is the best-known example of a school district that has been successful in persuading taxpayers that an investment in pay-for-performance is a worthwhile endeavor. Denver voters approved \$20 million in additional funding to support ProComp, the district's new pay plan that will eventually move teachers from the single salary schedule onto a system that links teacher pay to additional knowledge and skills, as well as improved pupil performance.

The additional Denver funding was a product of a multi-year, intense public relations and media campaign aimed at explaining the new compensation system to taxpayers and persuading them to support it. Such added funding does not come easily or quickly. However, superintendents and school boards usually know their communities sufficiently well that discussing the possibility of such a funding effort is worthwhile. Raising taxes should not be seen, however, as a quick and likely fix.

Approaching a city council, a county board of supervisors, or a state legislature for additional performance-pay funding is also a possibility. This might be done through professional associations, e.g., school superintendents or school business managers. Alternatively, a consortium of comparable districts might direct their lobbyist to pursue such a goal, or a single district on its own might try it.

Strategy 5

Seek philanthropic or corporate support

National foundations such as the Walton Family Foundation, the Bill & Melinda Gates Foundation, and the Broad Foundation have declared performance pay to be among their funding priorities.⁵⁶ (These funding priorities are often targeted to certain geographic areas, and states and districts should prepare ahead of time by reading websites and brochures carefully.) It is important to keep in mind that foundations strive frequently to be associated with something innovative. One would think that performance pay would be perceived as innovative almost anywhere, and, thus, pursuing matching funds, or bridge funding, from local, regional, and national foundations may well be appropriate. The Houston Independent School District, for example, received \$3.6 million in philanthropic support from the Broad Foundation in 2007 to support and expand its pay-for-performance system.⁵⁷ Denver, too, has received philanthropic support from the Broad Foundation, as well as the Rose Community Foundation, the Daniels Fund of Denver, the Denver Foundation, the Donnell-Kay Foundation, the Jay and Rose Phillips Family Foundation, the Piton Foundation, and the Sturm Family Foundation.⁵⁸

Where a school district is fortunate to have in its midst a large, profitable corporation, approaching the foundation officer there may also prove productive. Some school districts, such as New York City and Guilford County, North Carolina, have formed business-education partnerships to secure corporate support for their performance-pay programs. The New York City Board of Education and the New York City Partnership & Chamber of Commerce, for example, created the Breakthrough for Learning program in 1998 to reward educators and schools that met reading and mathematics improvement targets. Teachers could receive up to \$2,000; principals could receive up to \$15,000; and superintendents could receive up to \$30,000 in performance awards.⁵⁹

Similarly, Guilford County Public Schools formed a partnership with the University of North Carolina system and Action Greensboro, a coalition of local foundations and businesses. The partners provided a \$2 million grant to the district in 2006 to expand its Mission Possible program to two additional high schools. The program offers \$10,000 recruitment bonuses to eligible math and English language arts teachers who agree to work in designated low-performing schools and up to \$4,000 in additional performance pay if students exceed academic growth targets. Participants also receive mentoring, training, professional development stipends, and laptop computers.⁶⁰

Educators frequently are anxious regarding prospects for sustaining an innovation. Their anxieties in this regard are understandable. It is easy to read a history of education and see the huge graveyard of good ideas that, after some period of high visibility, died for lack of interest or lack of resources.

However, pay for performance holds the prospect of generating its own future funding. The more evidence that accumulates showing that performance-based pay is positively associated with teacher effectiveness and higher levels of student achievement, the more likely it is that state legislatures, philanthropic organizations, business, and other decision-making bodies will open up the purse strings and pay generously for performance bonuses.

Conclusions and recommendations

This module has described how to make accurate and reasonable cost projections to ensure that a performance-based teacher compensation system is affordable and can deliver financial rewards as promised. It has also suggested five strategies that states and districts can use to secure adequate and stable funding so that the pay system can be sustained over time. We offer the following six recommendations to help states and districts avoid costly mistakes and to minimize the possibility of financial overexposure.

Recommendation 1

Designers of pay-for-performance systems should balance teachers' desires for pay systems to be as inclusive as possible with administrators' desires to control costs and stay within budget.

Open-ended pay plans that allow many individuals or schools to qualify for awards tend to be more popular among teachers than tournament-style pay plans. Because individuals are not competing for a fixed pool of funds, many teachers believe that open-ended pay plans are fairer and less likely to have adverse effects on collegiality and cooperation. On the other hand, a tournament helps ensure that payouts do not exceed available revenues because it places a cap on the percentage of individuals or schools that can qualify for performance awards. A tournament also makes it much easier to estimate total program costs. Like many other issues concerning performance pay, states and districts will have to weigh multiple factors, such as teacher acceptance of the pay plan and affordability, to decide what will work best in their particular circumstances.

Recommendation 2

No matter what type of pay plan is chosen, states and districts should rigorously project program costs, year by year.

This paper has described several ways in which states and districts can estimate the costs of different types of performance-based compensation systems, as well as market-based compensation systems that award premium pay for working in a hard-to-staff school or for teaching a hard-to-fill subject. At minimum, states and districts should project maximum program costs each year to avoid the possibility that the numbers of teachers or schools that qualify for awards exceed available funds. In addition, we strongly recommend that states and districts collect and analyze the necessary student achievement and teacher data to estimate probable financial exposure. This will allow education leaders to present more reasonable estimates of actual program costs to policymakers and the public, who understandably want reassurance that the compensation system is affordable.

All cost projections should be conducted year by year because it is unlikely that the numbers of individuals eligible for awards and the maximum size of the rewards will remain constant. In addition, the compensation system should be recalibrated periodically because it is likely that more teachers will qualify for rewards over time. However, states and districts are cautioned to resist any pressure to lower standards as a way to allow more teachers to qualify for awards.

Recommendation 3

States and districts should be prepared to pay financial awards to everyone who earns them.

Rigorously projecting program costs greatly reduces the possibility of cost overruns. Nevertheless, officials should discuss in advance how they would proceed in the event that they underestimate the number of teachers or schools that qualify for awards or they underestimate total program costs. Increasing the budget may not be possible in some cases, even though it may be the preferred option. In such cases, reducing the size of the awards may be the only viable alternative.

Strategies that should be avoided include changing eligibility criteria or the original performance improvement targets so that fewer teachers qualify for awards. This strategy can be very risky and may result in legal action or penalties. Refusing to pay individuals who legitimately earned awards is not an acceptable option under virtually any circumstances.

Recommendation 4

States and districts should pay rewards as close to the period of performance as practicable, but should allow enough time for the reasonable delivery of data and rigorous quality-control checks.

States and districts contemplating a performance-based pay system are strongly advised to consider a pilot or planning year. Lessons learned from other states and districts indicate that rushing to make a payout without allowing sufficient time for rigorous quality-control checks of student and teacher data can result in any number of costly errors that can damage the program's credibility. These may include identifying the wrong teachers for awards, paying teachers the wrong amounts, overlooking entire categories of teachers who should have received awards, or incorrectly matching teachers to the grades, subjects, and students that they taught.

Experience also suggests, however, that states and districts can adopt strategies to reduce the possibility of making these kinds of mistakes. Some districts, for example, have developed a student-teacher linkage verification process to provide opportunities for all teachers to review and confirm the names of each student that they taught, additional quality controls to ensure that teachers are coded correctly in the district's computer system, a secure Web site that allows teachers to review their awards before they are distributed, and an appeals process that allows teachers to request a review if they believe that calculations are in error.

Recommendation 5

States and districts should begin planning early to secure adequate and stable funding so that the new compensation system is sustainable.

Examples presented in this module show that states and districts fund new compensation systems in a variety of ways. In some cases, funding comes from local property tax increases or philanthropic support. In other cases pay plans are funded using existing general fund revenues or are funded as a separate line item in the state budget. Because evidence suggests that multiple attempts may be needed to secure these kinds of funding commitments, we encourage states and districts to begin planning early to ensure program sustainability. States and districts could also consider several other strategies discussed in this paper, such as repackaging some of their existing state and federal categorical program funds, reallocating substantial portions of dollars in the current salary schedule into a new one, and seeking corporate support.

Recommendation 6

States should ensure that any “hidden,” or additional costs of implementing a performance-pay system are not prohibitively expensive and are not simply passed down to school districts.

The additional costs involved in designing new tests or teacher evaluation systems that may be needed to measure teacher effectiveness can be substantial. In some Florida school districts, these activities were estimated to cost several hundreds of thousands of dollars because the state requires districts to adopt or develop tests in all subject areas so that all teachers are eligible to earn awards. In several cases, districts that had applied for state funds to cover the direct costs of teacher bonuses withdrew from Florida’s state performance-pay program when the magnitude of these additional and unforeseen expenses came to light.

This situation raises a number of interesting questions of fairness and affordability regarding how to measure the performance of teachers who teach subjects and grades that are not covered by statewide achievement tests. Florida, obviously, has grappled with this issue, as have several other states and districts. What we have learned from their efforts will be explored in more detail in another module.

As this module has shown, failure to estimate costs accurately and to take action at the outset to ensure that a new pay system can continue after start-up funds are exhausted has contributed to the early demise of a number of innovative teacher pay reforms. Teachers are not likely to support an incentive program or new pay plan if they do not believe that state and district officials will actually deliver earned financial awards as promised. States and districts can avoid many costly mistakes by rigorously projecting program costs year-by-year and by adopting the recommended strategies for sustaining adequate financial support that have been presented here. These steps will go a long way toward reassuring teachers and the public that a new performance-pay system is both affordable and sustainable over time.

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